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(56) Documents Cited
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(58) Field of Search
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(54) Abstract Title

A method of and apparatus for heat-free illumination of drinks dispenser taps

(57) A method of and apparatus for illuminating a translucent window in the casing of a beverage dispenser tap without causing heating of the tap, pipes or drink is described. The method includes locating within the casing one or more high intensity white light emitting diodes, arranged to illuminate said window.

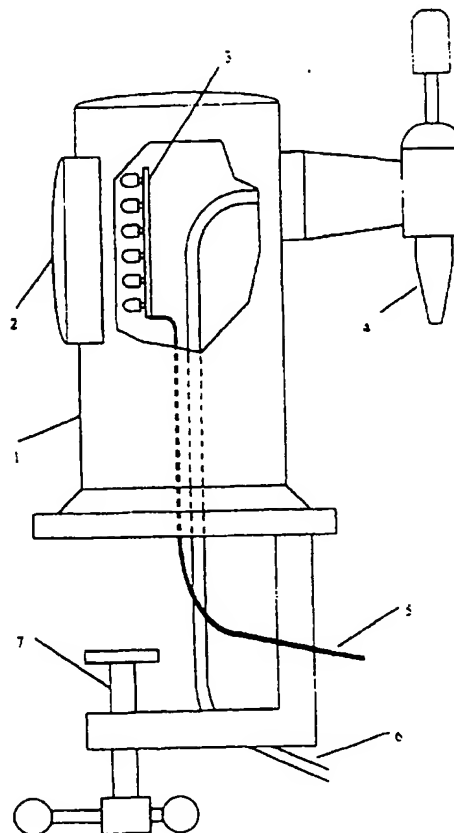


Figure 1

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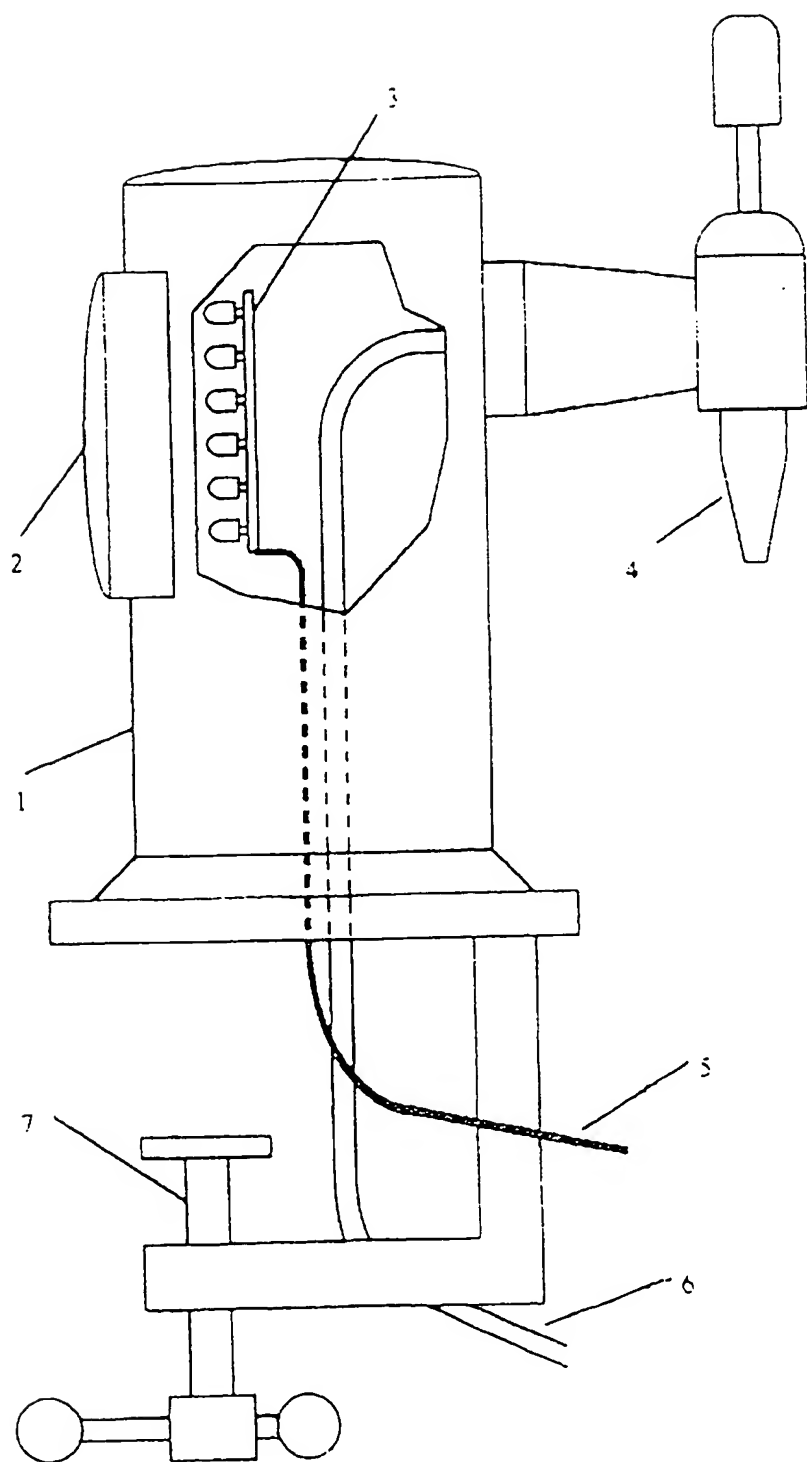


Figure 1

**A Method of and Apparatus for Heat-free
Illumination of Drinks Dispenser Taps**

5 This invention relates to a method of and apparatus for heat-free illumination of drinks dispenser taps.

 Most types of electric lighting, using lamps such as incandescent and fluorescent types, also produce a considerable amount of heat. This
10 can be very undesirable in many applications, for example, in the internal illumination of the taps used to dispense beverages such as beers in bars and catering establishments.

 These taps can include signs or badges which are illuminated from
15 inside for advertising purposes and to indicate that the particular drink is available. Heat generated by the lighting device causes the pipe through which the beverage flows to become warm and hence warms up the beverage. Also, in the case of effervescent beverages this heating causes an undue amount of frothing. One solution to this problem is to
20 clad the pipes in some form of heat resistant material to prevent heating of the fluid therein.

 These diodes emit light towards the blue end of the spectrum and include a phosphor which results in a high intensity white light with far
25 less heat than would be possible with conventional incandescent or fluorescent lamps.

 According to a first aspect of the present invention there is provided a drinks dispenser tap having a casing, an area of which
30 requires illumination from within the tap and a light source arranged to

illuminate said area, wherein the light source is one or more white light emitting diodes.

5 Preferably, the portion of the casing requiring illumination is a translucent window. Preferably, the window carries a name badge which indicates the beverage dispensed by the tap.

10 Preferably, the diodes are mounted on a panel adjacent the window.

Preferably, the diode or diodes are powered by low voltage power supply.

15 According to a second aspect of the present invention there is provided a method of illuminating a translucent window in the casing of a drinks dispenser tap without causing heating of the tap, pipes, or liquid, including using white light emitting diodes mounted with the casing as a light source to illuminate said window.

20 Preferably, the method includes mounting the light emitting diodes on a panel behind a translucent window, preferably carrying a name badge.

25 Preferably the method includes powering the light emitting diodes by remotely situated low voltage power supply.

30 According to a third aspect of the present invention there is an illumination device for use in a beverage dispenser tap as hereinbefore described.

According to a fourth aspect of the present invention there is provided a method of illuminating a translucent window in the casing of a drinks dispenser tap as hereinbefore described.

5 According to a fifth aspect of the present invention there is provided a drinks dispenser tap as hereinbefore described.

A specific embodiment of the invention will now be described, by way of example, with reference to Figure 1 which shows a side view of
10 a typical beer tap assembly with a section of the casing 1 cut away to show the parts inside. At the front of the assembly is a translucent window 2 carrying a logo to be illuminated. Inside the casing 1 is a panel 3 with high intensity white light emitting diodes 8 mounted thereon replacing the convention incandescent or fluorescent lamp.

15 The white light emitting diode 8 is a phosphor coated NICHIA blue LED which emits a high luminous intensity white light. The diode produces a luminous intensity of 0.4 candelas at a colour temperature of 8000K within an efficiency of 5 lumens/watt.

20 At the rear of the assembly is the actual fluid tap 4 used to dispense the drink. The light emitting diodes are powered from a low voltage power supply via a lead 5. The drink is supplied to the tap from a pressurised source via a pipe 6. The clamp 7 is used to secure the
25 assembly to the top of a bar or counter, when in use.

It can be seen that the source of illumination is close to the pipe conveying the beverage and that should any heat be generated it would result in warming of the pipe 6 and the beverage therein.

30 However, in the device in accordance with the present invention no substantial heating of the pipe 6 occurs.

Modifications of the invention may be incorporated without departing from the scope of the present invention. For example, the diodes 8 may be utilised to illuminate parts of the tap other than the window 2 carrying a logo.

5

In the description and claims the term "beverage dispenser tap" is intended to define the dispensing apparatus and not the actual fluid tap 4, detailed above.

Claims:

1. A drinks dispenser tap having a casing, an area of which requires illumination from with the tap and a light source arranged to illuminate said area, when the light source is one or more white light emitting diodes.
5
2. A tap as claimed in Claim 1, wherein the portion of the casing requiring illumination is a translucent window.
10
3. A tap as claimed in Claim 2, wherein the window carries a name badge which indicates the beverage dispensed by the tap.
4. A tap as claimed in Claim 2 or 3, wherein the diodes are mounted on a panel adjacent the window.
15
5. A tap as claimed in any claim, wherein the diode or diodes are powered by low voltage power supply.
- 20 6. A method of illuminating a translucent window in the casing of a beverage dispenser tap without causing heating of the tap, pipes, or liquid, including using white light emitting diodes mounted with the casing as a light source to illuminate said window.
- 25 7. A method of illumination as in Claim 6, including mounting the light emitting diodes on a panel behind a translucent window, preferably carrying a name badge.
- 30 8. A method of illumination as in Claim 6 or Claim 7, including powering the light emitting diodes by remotely situated low voltage power supply.

9. An illuminating device for use in a drinks dispenser tap as claimed in any previous claim.

10. A method of illuminating a translucent window in the casing of a
5 drinks dispenser tap as hereinbefore described with reference to Figure 1.

11. A drinks dispenser tap as hereinbefore described with reference to Figure 1.



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Claims searched: 1-11

Examiner: Roger Casling
Date of search: 24 February 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.P): G5C(CFF)

Int CI (Ed.6): G09F

Other: Online:WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2287569 A (COOK) see the whole document	1-9
X	US 4894647 (WALDEN) see column 2 line 11 et seq	1,5 and 9

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
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